

Hiroshi
Kushida <kushida.h@dev.mazda.co.jp> on 2002/01/08 18:22:23

To: 'Autoliv Japan: Mr. Touno' <Manabu.Touno@autolvasp.com>
cc:
Subject: RE: Sending J48C on-vehicle performance estimate data

Thank you for your continued assistance. Apologies for the repeat messages.
We also made a forecast of ODB with the model that was previously sent over (taking into account only chassis G and MEM retreat), but as expected, the target was not attained, bottoming of the head occurred on the STG wheel. Please verify ODB performance as soon as correlation is close to being completed. Kushida

Thank you for your continued assistance.

Sorry for the delay, but I am writing today to send along data for the Madymo on-vehicle forecast and countermeasure proposals that were made previously.

1. Madymo on-vehicle forecast data

- ① 56 front impact & 640DB: Chassis G, TTF, instrument panel retreat amount (retreat entirety of STG shaft and instrument panel), nosedive angle (I'm sending this for reference, but please estimate without this, as angle is small)
- ② STG collapse property: We discovered that there is 25mm of free running initially. I believe you looked into this previously, but please look again based on free running.

2. Proposed countermeasures

- ① Increase power of pretensioner
- ② Switch to dual pretensioner
- ③ Earlier TTF (max level would be to go from 16ms to 11ms)
- ④ Change belt pathway (revise buckle length?)
- ⑤ Induce torso angle
- ⑥ Reinforce seat pan
- ⑦ Revise knee blow load

As I informed you the other day, the fact that these countermeasures tend to loosen restraint in a front collision raises concerns about bottoming on the STG in an ODB. Please look into the following steps and get back to me by 1/15 next week: sled correlation, front impact on-vehicle performance prediction (→look into countermeasures) and ODB compatibility verification. (If this proves difficult, please respond with a progress report and action plan.) I apologize for the short notice, but appreciate your assistance in this matter.

<< File: J48C-Straight-Front-Madymo_data.xls >> << File:
J48C-ODB-Madymo_data.xls >>

Hiroshi Kushida

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PLAINTIFF'S
EXHIBIT

PX 128

EXHIBIT MM

9
12/3/15 - MEYER

Hiroshi
Kushida <kushida.h@dev.mazda.co.jp> on 2002/01/16 10:13:10



To: "Manabu.Touno@autolivasp.com" <Manabu.Touno@autolivasp.com>
cc:
Subject: RE: J48C on-vehicle performance prediction data

Thank you for your continued assistance.
I apologize for taking so long to get back to you every time.
I am sending along the chassis G for TP-2 LHD ODB.
As I informed you a moment ago, this is not the final version.
I will be in touch as soon as I have an update, but please use this waveform for the current study.

Thank you and best regards, Kushida

-----Original Message-----

From: Manabu.Touno@autolivasp.com [SMTP:Manabu.Touno@autolivasp.com]
Sent: Wednesday, January 16, 2002 1:05 PM
To: Hiroshi Kushida
Cc: Toshihiko.Kumagai@autolivasp.com; Yutaka.Nakajima@autolivasp.com;
Hiroyuki.Hirabayashi@autolivasp.com
Subject: RE: J48C on-vehicle performance prediction data

Dear Mr. Kushida, Mazda Motor Corporation

Thank you for your continued assistance. This is Touno of Autoliv Japan.
I went ahead and sorted through the acceleration waveforms for ODB conditions in the MADYMO study data.
The final amount of change in speed is 25m/s (90km/h).
Do you think the data is incorrect? Please confirm.

(Embedded image moved to file: pic30106.pox)

Manabu Touno
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Autoliv Japan Co., Ltd.
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<< File: pic30106.pox >>



- J48C_TP2-OFO82942.xls